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(54) CATALYST COMBUSTION DEVICE

(57) Abstract:

PURPOSE: To uniformize a temperature distribution in the entire area of a catalyst body, and to prevent the catalyst body from being deteriorated due to local heating, by providing a plurality of vent passages in the catalyst body installed in a combustion chamber so as to cause a difference in vent resistance.

CONSTITUTION: A rectangular catalyst body 5 has honeycomb-like skeletal structure with a plurality of vent holes 6 penetrating therethrough and is made of heat-resistant ceramics on which various kinds of metals or metal oxides are carried. The plurality of the vent holes 6 provided in the catalyst body 5 are formed into a small circulating area at positions having a large circulating flow rate corresponding to a premixing chamber 11 and an exhaust passage 12, and into a large circulating area at positions having a small circulating flow rate, so that the vent holes are made to cause a difference in vent resistance. More particularly, the plurality of the vent holes 6 are formed to have a small hole diameter at the side near to the premixing chamber 11 and the exhaust passage 12, corresponding to the circulating flow rate in the premixing chamber 11 and the exhaust passage 12, while being formed to have a large hole diameter at the side far therefrom. Accordingly, the vent holes 6 are ununiformly arranged

throughout the entire area of catalyst members 1, and the flow rate circulating through a plurality of the vent holes 6 of the catalyst members 1 is made uniform throughout the entire area of the catalyst members 1.

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